VF Series

SKOPE Glass Door Vertical Freezer

User Manual

MAN10521 Rev. 1.0 May 2012

SKOPE® Refrigeration

VF Series
SKOPE Glass Door Vertical Freezer
User Manual

MAN10521
Rev. 1.0 May 2012

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CONTENTS

1 Installation

Safety First 4
Positioning the Cabinet 5
Power Cord 5
Freezer Location 5
Ventilation 5
Shelves 6
Optional Door Lock 6

2 Operation

Automatic Start-Up 7
Loading Product 7
Electronic Controller 8
Introduction 8
Faceplate 8
Defrost 9
Continuous Cycle 9
Temperature Setpoint 9
Controller Reset 10
Alarms 11

3 Servicing

Cleaning 12
Cabinet 12
Condenser Coil 12
Lighting 13
Interior Light 13
Sign Light 14
Troubleshooting 15

1 Installation

Safety First

Always observe safety precautions when using any electrical appliance. Read these instructions carefully and retain them for future reference.

- When the appliance is used by or near young children or infirm persons, close supervision is necessary, especially to ensure children do not play with it.
- Do **not** use this appliance for other than its intended use.
- Do **not** cover the grilles or block the entry or exhaust of airflow by placing objects up against the refrigeration cassette.
- Do **not** probe any opening.
- Do **not** store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- Only use this appliance with the voltage specified on the cabinet rating label affixed to the refrigeration cassette.
- Ensure the appliance has adequate ventilation as this is essential to economical, high performance.
- Be careful not to touch moving parts and hot surfaces.
- For your own safety and that of others, ensure that all electrical work is done by authorised personnel.
- If the power supply flexible cord becomes damaged, it must be replaced by an authorised service agent or similarly qualified person in order to avoid a hazard.
- Ensure all necessary safety precautions are observed during installation or removal of the refrigeration unit.
- This appliance is not designed to be stable while in motion. Use extreme caution when moving or transporting the appliance.

WARNING

Always isolate the freezer from the mains power supply before attempting any maintenance.

CAUTION

Never overload the power supply, which could damage the freezer and product. See the rating label inside the cabinet for the safe power supply and current draw.

Positioning the Cabinet

Power Cord

The freezer has a flexible power cord fitted with a 3-pin plug, which exits from the top rear of the cabinet. Pull the power cord around so that it's not trapped before you position the cabinet.

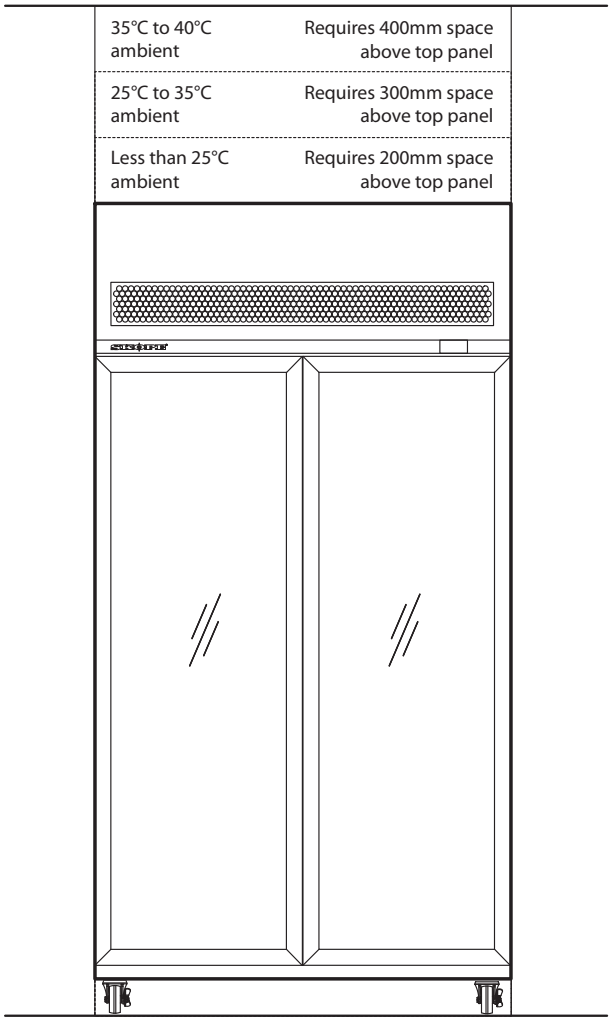
Freezer Location

The location of the freezer may be the single most important decision that will extend its life and ensure economical, high performance. We recommend that you put the freezer in the coolest place possible because it will use less power and last longer. Although the freezer operates in environs up to 40°C (104°F), we suggest that you not constantly run it at the upper end.

Avoid direct sunlight, warm draughts etc. Allow adequate space for doors to open and close properly. Self-closing doors have internal torsion bars pretensioned at the factory, and must be unobstructed. Ensure the cabinet sits on a level surface so that the doors shut and correctly seal. Level footing also prevents the condensate tray from overflowing.

Ventilation

See diagram below for ventilation guidelines. When positioning the freezer, ensure there is at least a 200mm space above the top panel. Adequate ventilation around the refrigeration unit is essential for efficient operation. The air surrounding the refrigeration unit must not exceed 40°C. Keep the ventilation slots at the top of the cabinet clear at all times and **never** store cardboard cartons or other objects on top of the freezer.


35°C to 40°C ambient
Requires 400mm space above top panel
25°C to 35°C ambient
Requires 300mm space above top panel
Less than 25°C ambient
Requires 200mm space above top panel

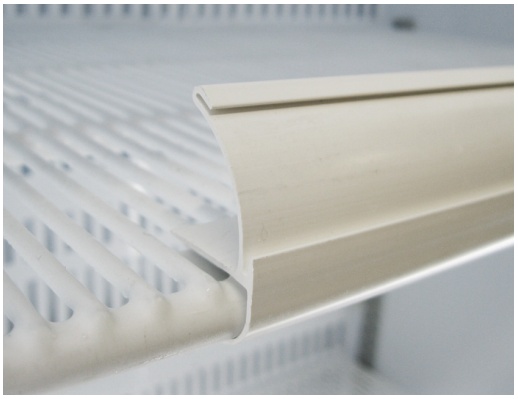
Shelves

The freezer is supplied with five wire shelves which may be positioned at different heights to suit various products. Always ensure that the shelf clips are securely engaged in each of the shelf support strips. Support strips are marked '+' for easy location of shelf clips.

To fit the wire shelves

1. Unpack the shelves and shelf clips from inside the cabinet.
2. Establish the desired position for the shelves and securely engage a shelf clip in each of the shelf support strips.
3. Sit the shelves on the shelf clips.

4. The ticket strips clip into place on the front of each shelf.



Optional Door Lock

Cabinets fitted with optional door locks have a key barrel type lock at the top each door. Use the supplied keys to lock and unlock the door as necessary.

2 Operation

Automatic Start-Up

After the cabinet has been positioned in a suitable place, plug it in and check the following activity.

Item	Activity
Condenser Fan	The condenser fan starts and runs at a slow speed. When the compressor starts, the condenser fan will run at full speed.
Lighting	The lights that illuminate cabinet interior and top sign (where applicable) will come on when the freezer is turned on. The light/s can be switched on and off via the electronic controller (see over page). Cabinets fitted with solid doors use an automatic light switch to turn the light on and off with door openings.
Electronic Controller	An electronic controller runs the freezer and is visible on the control panel above the door/s. The electronic controller display panel shows the cabinet temperature.
Compressor	The compressor starts about one minute after the lights go on. The compressor turns off when the product temperature reaches around -21°C and turns on again when it reaches about -18°C.
Evaporator Fan	The evaporator fan will not operate until the evaporator probe senses a temperature of -8°C on the evaporator coil. When the evaporator coil is below -8°C, the evaporator will run at slow speed or fast speed as required.

Loading Product

Let the freezer run for 30 minutes before loading it with product the first time. When loading the freezer:

- Allow adequate air space around each item to ensure even cooling and efficient operation of the freezer.
- Do not exceed a maximum load of 20kg per shelf.
- Remove some product if the shelves are flexing.
- Do not let anything overhang the shelves because this might stop the doors from shutting or even break something.
- Do not load product above the load limit indicators shown on the cabinet interior sides (see image below).

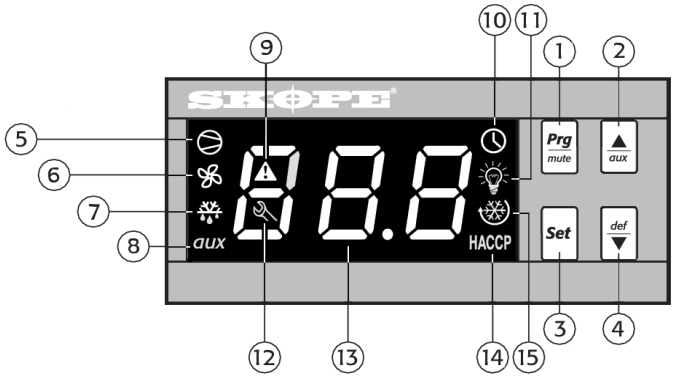
Electronic Controller

Introduction

The electronic controller controls the freezer, displays the freezer temperature and signals temperature alarms. It uses temperature probes to collect data and runs the freezer accordingly. The electronic controller is pre-programmed and usually requires no initial setup or additional programming. SKOPE does not recommend that the settings be changed unless necessary.

Faceplate

Because the electronic controller plays such an important role, it's helpful to know the parts of the faceplate you may use.



No.	Item	Description
1	Prg / mute	**Prg / mute:** To initiate program sets, press for 5 seconds. Mutes the audible alarm (buzzer).
2	▲ aux	**UP / aux:** To switch light/s on and off. To scroll settings **UP** (in program mode).
3	Set	**Set:** If pressed for more than 2 seconds displays and / or enables changing the temperature setpoint (see page 12).
4	def ▼	**DOWN / def:** To scroll settings **DOWN** (in programme mode).
5		**COMPRESSOR:** ON when the compressor and condenser fan starts. Flashes when activation of the compressor is temporarily delayed.
6		**FAN:** Shows when fan is operational.
7		**DEFROST:** ON when the defrost is activated. Flashes when the activation of the defrost is temporarily delayed due to procedures in progress.
8	aux	**AUX:** n.a.
9		**ALARM:** Flashes in the event of alarms.
10		**CLOCK:** On when real time clock is enabled.
11		**LIGHT:** On when the cabinet lighting is activated.
12		**SERVICE:** Flashes in the event of malfunctions.
13		**DISPLAY:** Shows the cabinet temperature.
14	HACCP	**HACCP:** n.a.
15		**CONTINUOUS CYCLE:** On when freezer is running in continuous run mode.

Defrost

To ensure efficient operation, the electronic controller forces a defrost cycle when required. During a defrost cycle, the compressor stops, **DEF** and the ❄ will display on the electronic controller faceplate. The freezer will resume normal operation once the defrost cycle has finished. A manual defrost can also be initiated by pressing and holding the def ▼ button.

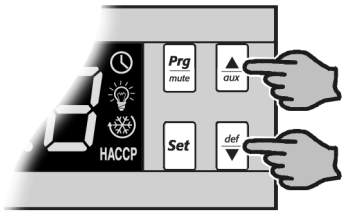
Continuous Cycle

The continuous cycle can be used to pull down the temperature of product inside the freezer quickly. During a continuous cool down the compressor runs continuously for a set time.

To start a continuous cycle

1. While the freezer is switched on and running, press and hold the ▲ aux and def ▼ buttons for five seconds.

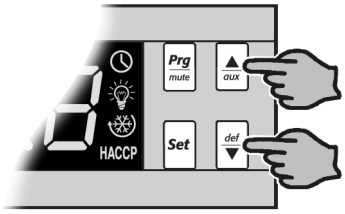
   The ❄ symbol will display during a continuous cycle.



To stop a continuous cycle

1. The electronic controller will automatically stop the continuous cycle after a period of time.

   The continuous cycle can be stopped by pressing and holding the ▲ aux and def ▼ buttons for five seconds.



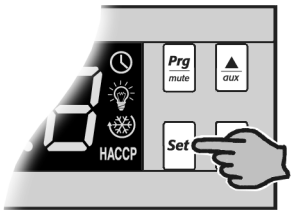
Temperature Setpoint

The freezer temperature setpoint is factory set at -21°C. If necessary the standard setting can be adjusted between -26°C and -16°C.

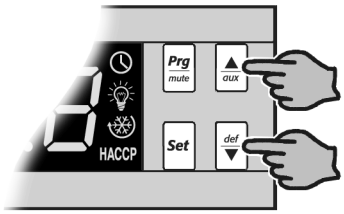
SKOPE do not recommend that the setpoint be changed unless it is absolutely necessary, and then only by small increments at a time.

To view and adjust the temperature setpoint

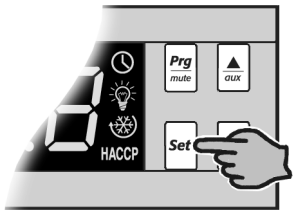
1. To view the setpoint: press and hold the ***Set*** key for 2 seconds, until the setpoint value flashes



2. To adjust the setpoint: press either the ▲ aux and def ▼ keys to display the required setpoint value.



3. Press the ***Set*** key again to memorise the new setpoint value. If this is not done within 60 seconds, changes will be lost and you will need to repeat the above procedure.



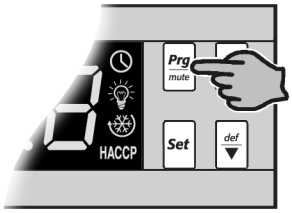
Controller Reset

To delete program modifications and reset the controller to SKOPE default program or when a replacement controller is being fitted, a 'Controller Reset' must be performed.

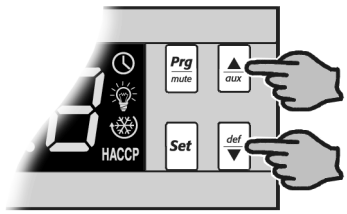
To reset the controller

1. Disconnect the freezer from the power supply.

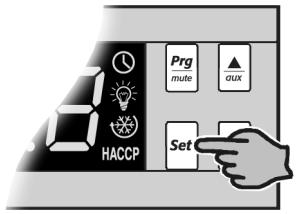
2. Press and hold the Prg/mute key while plugging the freezer into the power supply (this may require two people). After a few seconds the controller is reset and program mode '**bn0**' is displayed. The controller must never be left in program mode '**bn0**' as failure will occur.



3. Press the ▲ aux or def ▼ keys to select '**bn1**' for SKOPE default program.

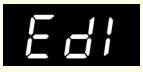
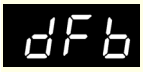


4. Immediately press the **Set** key to confirm the preferred program. If not confirmed within 60 seconds the freezer will remain in program mode '**bn0**' (and cause failure). If this occurs, repeat the above procedure.



Alarms

The following table explains messages that the electronic controller displays and related alarms. Alarms signal unexpected operational changes in the freezer and stop when action is taken to resolve the problem.

Code	Display Icon	Alarm Description	Initial Action
	Flashing	Product HIGH temperature alarm	1. Check the cabinet product loading to ensure ventilation slots are not blocked and that product does not overhang the shelves. 2. Ensure the cabinet is installed with good refrigeration unit ventilation. 3. Check and clean the condenser coil (see page 12). 4. Unplug cabinet from the power supply for 1 minute, then reconnect to power supply. If problems persist, contact SKOPE
	Flashing	Product LOW temperature alarm	
		Door open alarm	Check door is closed.
		High ambient alarm	Check ventilation and operating conditions (see page 5).
		High pressure alarm	Check and clean the condenser coil (see page 12).
	Flashing	Control probe fault	Contact an authorised service agent to replace probe.
	Flashing	Evaporator probe fault	
	Flashing	Ambient probe fault	
	None	Defrost over-time limit	Unplug cabinet from the power supply for 1 minute, then reconnect to power supply. If problems persist, contact an authorised service agent.
	Flashing	Real-time clock fault	
	Flashing	Controller E prom error	
	Flashing	Controller E prom error	
	None	Start defrost request	None
	None	End defrost request	

3 Servicing

Cleaning

Cabinet

Periodically wipe the inside and outside of the cabinet with a damp cloth, taking care to keep moisture away from electrical parts. As with any maintenance, ensure the cabinet is disconnected from the power supply before cleaning.

Condenser Coil

To ensure trouble-free performance, we strongly urge monthly cleaning with a soft brush to remove dust and fluff. A more thorough cleaning is recommended every six months, by qualified service personnel. The condenser coil **must** be kept clean for efficient and reliable operation.

WARNING

Disconnect the freezer from the power supply before cleaning the condenser coil.

To clean the condenser coil

1. Disconnect the freezer from the power supply.
2. Remove the sign assembly. Lift the assembly up and off the sign sides and if necessary unplug it from the cabinet.
3. Clean the condenser coil with a soft brush.

4. Refit the sign assembly and reconnect the freezer to the power supply.

Lighting

This freezer is designed for use with LED tubes and is not compatible with fluorescent tubes.

IMPORTANT
DO NOT use fluorescent tubes.

Interior Light

The cabinet interior is lit by one side light or one centre pillar light (see table below for details), which can be replaced without moving shelves or removing product.

Interior light specifications

Model	LED Tube Specification
VF650	1 x side light: 22 Watt T8 LED tube (Ø26mm x 1500mm)
VF1000	1 x centre pillar light: Twin 22 Watt T8 LED tube (Ø26mm x 1500mm)

To replace the cabinet interior side light (model VF650)

1. Disconnect the freezer from the power supply.
2. Remove the diffuser by squeezing it until it is released from the aluminium housing, and then push the diffuser out of the way.
3. Rotate the LED tube until the pins on the ends of the tube align with the slots, then slide it out.
4. Fit a new LED tube. Ensure the LED tube is fitted with the power end at the top.

5. Refit the diffuser by slipping the back section into the housing, then squeezing and snapping the front section of the diffuser into place as you work down the length of the light.

To replace the cabinet interior centre pillar light (model VF1000)

1. Disconnect the freezer from the power supply.
2. Rotate the LED tube until the pins on the ends of the tube align with the slots, then slide it out.
3. Fit a new LED tube. Ensure the LED tube is fitted with the power end at the top.

Sign Light

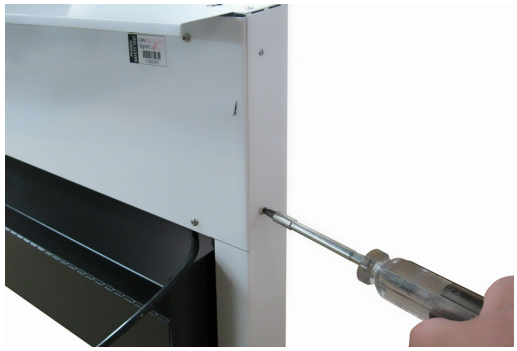
Not as standard - lit sign freezers only. The sign unit is lit by one LED tube (see table below for details) which can be replaced by removing the front sign panel.

Sign light specifications

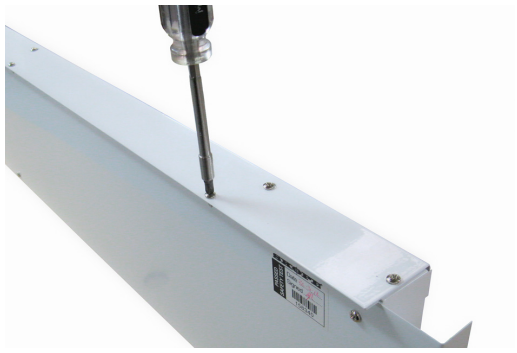
Model	LED Tube Specification
VF650	1 x 9 Watt T8 LED tube (Ø26 x 600mm)
VF1000	1 x 12 Watt T8 LED tube (Ø26 x 900mm)

To replace the sign light

1. Disconnect the chiller from the mains power supply.
2. Remove the sign assembly. Lift the assembly up and off the sign sides and unplug it from the cabinet.
3. Seperate the light sign light assembly from the sign panel by undoing the two fixing screws on each side of the sign panel.



4. Remove the top of the sign light assembly by undoing the four fixing screws on the top of the sign light assembly.



5. Remove the plastic sign panel (and artwork if present) from the sign light assembly.
6. Rotate and remove the failed LED tube.

7. Fit the new LED tube.
8. Refit the clear front panel (and artwork if present) and screw the sign top cover back onto the top of the sign assembly.
9. Refit and fix the sign light back onto the sign panel assembly.
10. Plug the sign assembly back into the cabinet and slot the assembly back onto the sign sides.

Troubleshooting

For questions about the electronic controller, see page 11. For problems with the cabinet and refrigeration cassette, use the following table.

Problem	Possible Cause	Suggestions
• Cabinet not operating • No controller display	• Loss of power supply	• Check mains power supply.
• Interior light not on	• Failed LED tube	• Replace LED tube (see page 13).
	• Blown cabinet fuse	• Contact an authorised service agent to replace it.
• Power consumption is higher than expected	• Unit operating too hot	• Clean the condenser coil (see page 12). • Ensure the cabinet has good ventilation around the refrigeration unit (see page 5). • Ensure the cabinet is in a cool spot.
	• Cabinet doors are opened excessively	• Ensure doors are closed more often.
• Product is too warm	• Restricted airflow to cabinet	• Ensure product is not blocking airflow slots. • Ensure there is space around individual product pieces.
• Warm cabinet temperatures	• Blocked condenser	• Clean the condenser coil (see page 12).
• Compressor operating for long periods (more than 1 hour)	• Poor ventilation around refrigeration unit	• Ensure the cabinet has good ventilation around the refrigeration unit (see page 5).

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